

U24-12XP

Part Number 1008956

Group 24, 12 Volt, 118 Ah Lithium Ion Battery Module

Lithium Battery provides safe, reliable and mobile energy solutions for energy storage and transportation. The U24-12XP is a high-performance, 12 volt battery, built on a patented Lithium Iron Phosphate chemistry platform providing over 1.5 kWh.

The U24-12XP is ideal for material handling, stationary energy storage, and commercial EV or marine applications. The module's inherent safety, long cycle life, and zero maintenance offers end-users another alternative to other battery chemistries and diesel powered solutions by replacing with this reliable lithium ion solution.



Electrical Specifications

Voltage (nominal)	12.8 V
Capacity @ C/5, 25 °C (typical)	118 Ah
Energy	1.51 kWh
Discharge Cont./Peak (30 sec)	150 A / 300 A
Discharge Cutoff Voltage	10 V
Recommended Charge Voltage	14.6 V
Charge Float Voltage Range	13.8 - 14.6 V
Cont. Current/Peak (30 sec)	236 A / 354 A
Recommended Charge CCCV	≤ 59 A to 14.6 V

Discharge Temperature	-10 °C to 50 °C
Charge Temperature	0 °C to 45 °C
Self Discharge @ 25 °C	< 2% per month
Specific Energy	92 Wh/kg
Energy Density	150 Wh/l

Mechanical Specifications

Height (excluding bolts)	225 mm	8.86"
Width	172 mm	6.77"
Length	260 mm	10.23"
Weight	16.3 ± 0.1 kg	35.8 lbs
Cell Configuration	4lFpR27/66-36	

Terminal Hardware	M8 x 1.25	
Terminal Torque	16 Nm	141 in-lbs
Plastic Case	Flame Retardant	
IP Rating	IP56	



Features

- >4000 cycles at 80% DOD
- Create systems 12 - 1000 V
- Series and/or parallel operation
- Automatic cell monitoring & balancing
- Temperature monitoring of cells
- Rugged mechanical design
- Dual lug contacts
- Thread locking feature
- Footprint of Group 24 lead acid case
- Maintenance-free
- No hydrogen generation or gassing

Benefits of Lithium (LiFePO₄)

Efficient & Fast Charging

High charge efficiency of >90%. Increases productivity, reduces energy costs and eliminates the need for investments in battery change out systems.

High, Uniform Discharge Voltage

Delivers stable voltage during discharge and increases equipment performance.

Longer Life

Provides > 10 times the life of lead acid batteries.

Robust Safety

Multiple levels of protection prevent operation outside of current, voltage, and temperature limits.

- No thermal runaway
- No corrosive acid leaks
- No explosive gassing

Space and Weight Efficiency

Systems provide >3 times the energy per weight of lead acid.

Environmentally Safe

Does not contain toxic metals such as cobalt, lead, cadmium, nor any corrosive acids or alkalis.

Contact Us

lithionbattery.com/contact-us/

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Battery Management System

The U-Charge Battery Management System (U-BMS) integrates seamlessly with U24-12XP applications. The battery system manages all battery module parameters in real-time and system information can be monitored via CANbus.



Event	Default Warning (Adj)	Fault
High Temperature	55 °C	65 °C
Low Temperature	-5 °C	-15 °C
High Voltage	3.9 V	any cell 4.2 V
Low Voltage	2.8 V	any cell 2.0 V
Over Current	time + current	
Low SOC	20%	

Protection

Over/Under Voltage
Over/Under Temperature
Over Current
Pre-Charge Control

Data Logging w/External Device

Faults/Warnings
I/V/T History
State of Charge

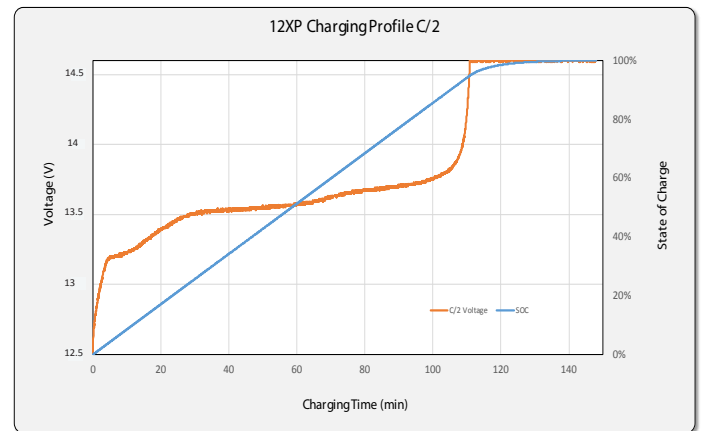
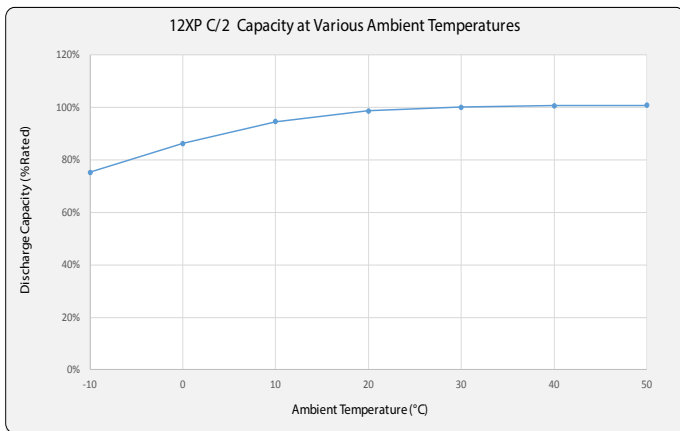
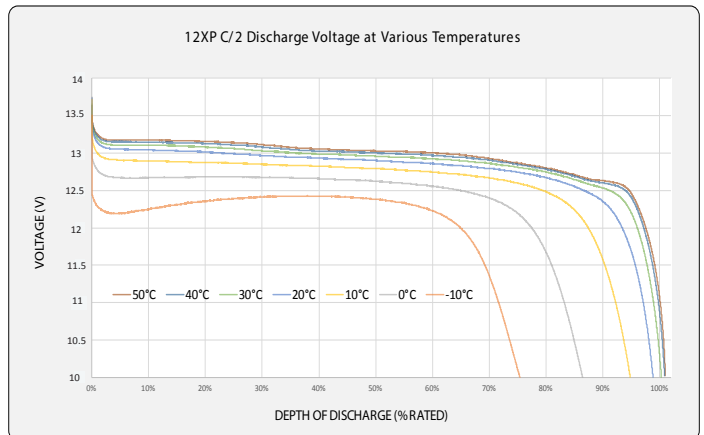
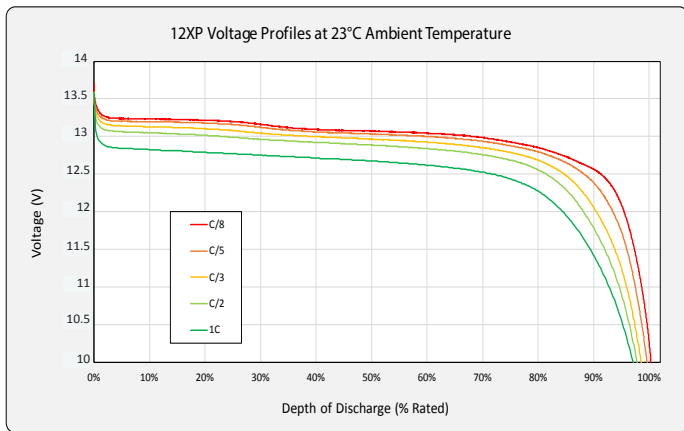
Software

Firmware
Real Time Diagnostics
Data Download
Data Analysis

Communication

Cable to USB
CAN2.0B

Performance



Certifications

- UL 1642 (cells)
- IEC 62619 (pending)
- FCC Class B, CE
- UN 38.3

Shipping Classifications

UN 3480
Class 9

All specifications are subject to change without notice. All information provided herein is believed, but not guaranteed, to be current and accurate. Torque values apply to modules manufactured Wk 38 2025 onwards, for older modules please contact Lithion.

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